
EXHIBIT D



μ -Fiber[®] Microwire
The Hidden Security Solution



***“Enhanced Business Security
Through Microwire Technology”***

μ -Fiber[®] Products & Services

September 20, 2002

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*Demodulation LLC Proprietary and Confidential Information***1 Executive Summary****1.1 Company Overview**

Demodulation LLC is a limited liability company incorporated on January 2002 in the State of New Jersey to develop, produce and market a series of precedent setting anti-theft and security products.

These products directly address the national security issues of inventory control (container shipping status/contents), authentication (ID and Credit Cards), and security printing (currency, passports, checks) and the commercial anti-theft issue of electronic article surveillance (EAS).

Funding to date has been only from the Founder. We are seeking government grant support and/or Angel investment of \$6M to complete non-encoded and encoded working prototypes, and a 1st round of investment of about \$14M to develop the Company into a profitable commercial enterprise.

1.2 The Business Environment and Opportunity

The global cost of counterfeiting, product tampering & retail theft is estimated at \$600 billion dollars annually and is growing at 15% per year. In the US alone, retailers lost \$33.2 billion, or 1.80 percent of their total 2000 annual sales to a combination of employee and customer theft, administrative error and vendor fraud. (See University of Florida National Retail Security Survey (NRSS)) In 2000, American retail employees stole more than \$15.2 billion from their employers, while retail customers -- shoplifters - lifted more than \$10.2 billion.

- Employee theft accounted for 45.9% (\$15B) of annual shrinkage losses; shoplifting = 30.8%(\$10B); administrative error = 17.5%(\$5.4B); and vendor theft = 5.9% (\$1.9B).
- Average loss was \$195 per shoplifting incident and \$1,445 per employee theft incident.
- Fourteen loss prevention systems were used by at least 25% of the companies. Nonetheless, only three systems and personnel programs were slated for increased usage by at least 10% of the companies including acoustomagnetic EAS (14.2%), vendor source acoustomagnetic tagging (11.7%), and mystery/honesty shoppers (11.7%).
- At present, only 0.2% of sales is invested in EAS systems. Currently available products do not meet the needs of the market.

Current EAS tags are not only obviously visible, but also do not prevent employee (back door) theft. The industry wants to move to source tagging and concealing EAS tags. This specifically requires manufacturers to incorporate EAS tag into the packaging of the product. This sharply reduces the cost of application of EAS tags and provides greater security since the tag remains with the merchandise. However, this also requires EAS manufacturers to produce lower cost, less visible tags. It has been estimated that for every \$0.001 reduction in price for the tag, the available market increases 2-3%.

Our products will bring revolutionary technology to the marketplace and will feature lower cost, higher quality, together with previously unattainable levels of security and adaptability. And, they will be not only invisible, but also capable of accepting encoded data. With their introduction, the current rules of the Security Marketplace will be shattered, opening an entirely new window of opportunity for our Company while creating a substantially higher order of security expectations for both national and international business and government clients.

*Demodulation LLC Proprietary and Confidential Information***1.3 The Market**

Worldwide market conditions for new applications to enhance protection from forgery, fraud, brand abuse, and theft have never been more favorable. Governments, industry, and consumers are stimulating this demand for quality security solutions. The environmental conditions of the marketplace are so strong that even offerings having less than optimal performance have found commercial success.

Our primary competitors in the EAS market are Sensormatic and CheckPoint. These companies dominate the market with combined sales of \$1.9B and a 60% market share. Sensormatic claims that 96 out of the top 100 retailers in the US use their technology. Checkpoint uses radio frequency (R.F.) technology while Sensormatic uses acoustomagnetic (A.M.) technology, both of which are patented. Sensormatic patents will expire in the year 2002, which should open market opportunities. An electromagnetic (E.M.) technology is emerging and is used primarily in Europe, however it is a much more competitively priced technology. Traditional EAS tags produced by Sensormatic Corporation currently sell for \$.025 versus \$.010 for the E.M. products.

1.3.1 Commercial Security Market

Two suppliers dominate the global market for EAS product sales in the Commercial Marketplace. These two suppliers alone accounted for \$1.9 billion of sales in 1999. Further, these sales are projected to grow 10-15% every year, according to the Industry Security Association.

Sensormatic and Checkpoint have proven the commercial value of rudimentary EAS technology. These companies have grown dramatically over the past decade offering only the most basic EAS product lines. The market is ripe for innovative products and processes that bring higher quality, lower costs, and more efficient utilization.

Key patents of competing technologies are about to expire, thereby facilitating market penetration by others. Regardless of the emergence of potential competitors, DMOD technology will dominate the marketplace through *low-cost* manufacturing, greater ease of application by the customer, and proliferation of source tagging.

1.3.2 Government Security Market

In the USA, this includes Federal and State Governments and Legislatures as well as State and Local Police departments. Non-government users include conference facilities at corporate campuses and hotel venues as well as sensitive R&D facilities. It is estimated the Government Security Market opportunity is estimated to be \$1.2 billion. This figure was provided by Homeland Security sources, however we believe the market opportunity to be much larger. Ongoing maintenance and upgrade revenues are projected at 20% of the installed base. Consulting revenues, based on services provided to government agencies to modify or tailor standard products to special applications, such as for counter-terrorism, may double the size of the government market.

The only competition in the Government Security Market is from internal, classified programs that may have developed similar solutions for specific problems. Although these solutions may be much more robust than DMOD Systems, by their nature (i.e. highly classified) most are not reusable and those that are are extremely expensive to reuse.

It is not apparent that there are government or regulatory restrictions that would affect *μ-Fiber* microwire and products made therefrom. There are no HS&E or magnetic issues associated with *μ-Fiber* microwire.

*Demodulation LLC Proprietary and Confidential Information***1.4 The DMOD Edge**

Demodulation, LLC has an exclusive, worldwide licensing agreement with the Romanian National Institute of Research and Development for Technical Physics (NIRDTP) for the production, processing, and application of glass-coated microwire for the life of the NIRDTP patents on this technology. We also have a partnership agreement with Alfred University, the premier institution in the United States for research on glass-coated amorphous microwire technology that assigns all commercial intellectual property rights to the Company.

Our product is revolutionary both in terms of processing and application technology, and totally unlike any current conventional materials used in anti-theft applications. It offers government and commercial security solutions not currently available from existing products.

The base technology is termed “electromagnetic” and relies on a special manufacturing process to draw an amorphous alloy wire or fiber that is encapsulated with glass in a one step process to produce *μ -Fiber* microwire. With the *μ -Fiber* microwire EAS system we have a virtually invisible and undetectable anti-theft product. Thus, for the first time, we have the capability to integrate the EAS system directly into the product itself at the factory at no cost to the retailer. The *μ -Fiber* microwire can be directly sewn into garments or directly dispersed into paper – all during manufacturing.

In retail store operations, the *μ -Fiber* microwire EAS system has the capability to do much more than just the ON/OFF of conventional technology. With our patented System the retailer alarm broadcasts not just the presence of the item, but the actual identity of the product. When applied to all merchandise, it will provide signals that are picked up by receivers located at all exits and/or cash registers, including employee exit points. The *μ -Fiber* microwire EAS system can be activated/deactivated on command, which allows use of the same tagging system throughout the manufacturing, distributing, and retail selling processes. The tags are controlled inconspicuously through the reading protocol instead of the current process with magnetic pads that regularly spill over to wipe out information from credit cards. Since the system uses radio communications, the tags can be packaged inside the goods, not just inside the containers. That prevents product removal with the alert tag left behind in the box.

1.4.1 Demodulation EAS Pricing vs the Competition (\$/Tag)

Company		2003	2004	2005	2006	2007
Sensormatic	AM	0.025	0.025	0.028	0.028	0.030
Sensormatic Unitika Wire	(EM)	0.019	0.019	0.020	0.020	0.021
CheckPoint	RF	0.040	0.040	0.041	0.041	0.042
Wallace	AM & RF	0.025	0.025	0.028	0.028	0.030
Demodulation		0.010	0.010	0.013	0.013	0.013

*Demodulation LLC Proprietary and Confidential Information***1.5 DMOD Products and Services**

Our goal in forming Demodulation LLC is to develop, produce and market a series of precedent setting anti-theft and security products. These products directly address the national security issues of inventory control (container shipping status/contents), authentication (ID and Credit Cards), and security printing (currency, passports, checks) and the commercial anti-theft issue of electronic article surveillance (EAS).

Our initial DMOD product line will be:

1. **Basic μ -Fiber** microwire having alloy and glass chemistries manufactured in several diameters to meet the needs of specific applications.
2. **μ -Fiber** microwire systems -- Value-added products such as EAS tags, fabrics and labels; sensors and transducers; inductive components and EMI/RFI filters -- all built upon the basic **μ -Fiber** microwire.

The **μ -Fiber** microwire Tracking System is ideally suited for authentication of product shipments through customs. In this application we produce a specialized marker that is applied to the surface of the container at time of shipment. This marker then becomes a part of the container during transit and is readable remotely.

The **μ -Fiber** microwire Identification System will be for security cards, ID Cards, Driver's Licenses and remote access products. The integration of **μ -Fiber** microwire technology into personal identification cards will provide enhanced security that is tamper-proof. Additionally, the utilization of **μ -Fiber** microwire will enable remote authentication.

The **μ -Fiber** microwire Currency Certification & Tracking System will be incorporated into the paper making process in a variety of security configurations, i.e. strands, staple, & geometric arrangements. The product is resistant to corrosion, and to signal degradation resulting from extreme flexure of the currency. The signatures can be read instantaneously, which allows high speed counting and validation. Thus, currency counterfeiting becomes virtually impossible because the **μ -Fiber** microwire carries a customized signature and is essentially invisible.

1.6 Demodulation LLC Company Leadership Team

Demodulation LLC has assembled a management team the members of which are among the best in their respective fields. The technical staff has unparalleled experience with a combined total of over 500 technical papers and over 100 issued patents, all of which are related to the technology of DMOD.

1.6.1 Board of Directors

James E. O'Keefe, *Chief Executive Officer/President*. Alfred University, B.S. in Ceramic Engineering. Founder of Demodulation, LLC.

Peter Cuneo, *CEO Marvel Enterprises*: Vice Chairman of the Board of Trustees of Alfred University. Alfred University (B.S. Glass Science) and at Harvard University (M.B.A) Chief Executive Officer of Marvel Enterprises, Inc (NYSE company)

General Thomas L. Wilkerson (Retired), Consultant on Homeland Security and Federal Government Business. Former President/CEO of MBIA Muniservices Company. Commander, Marine Forces Reserve; Chief Marine Corps Planner; Special Assistant to Chairman, Joint Chiefs of Staff; Member of the Council on Foreign Relations and is a graduate of the U.S. Naval Academy.

*Demodulation LLC Proprietary and Confidential Information***1.6.2 Management Team**

Dr. Howard H. Liebermann, Chief Scientist/Vice President Technology; Polytechnic Institute of Brooklyn (B.S. Metallurgical Engineering), University of Pennsylvania (M.S., Ph.D. Metallurgy and Materials Science). 30 issued patents and over 87 published papers in this field. Member of the International Advisory Committee on Rapidly Quenched Materials and a member of I.E.E.E. Magnetics Society, American Society for Metals, The Metallurgical Society of A.I.M.E., and the Iron and Steel Society

Dr. William LaCourse, Chief Scientific Advisor: Principle Research Scientist at Alfred University Acting director of the Institute for Glass Science and Engineering. Ph.D. Rensselaer Polytechnic Institute in materials Science in 1969.

Dr. Ryusuke Hasegawa, Director of Applications Engineering/R&D. Nagoya University (B.S., M.S. Electrical Engineering) California Institute of Technology (Ph.D. Materials Science). Instrumental in the development of acoustomagnetic anti-theft products (Sensormatic) and holds more than 30 patents in this field. Considered one of the foremost experts in the world in this field and brings unparalleled expertise in the field of magnetic/anti-theft applications.

William Harrison, Vice-President Sales & Marketing – Former Sales Director, Honeywell’s Amorphous Solutions business. Veteran of the magnetic products industry with extensive international sales and marketing experience in high frequency magnetics, and pulse power.

Ernest D. Buff, Esq. Legal Counsel – Thirty years experience in domestic and foreign intellectual property law. Admitted to practice in New Jersey, Massachusetts, District of Columbia, and before the Patent Bar, CAFC, the Court of Claims, and the U.S. Supreme Court.

Mr. Lou Reda, Director of Human Resources – B.S. University of Connecticut with extensive experience in staffing, executive recruiting and placement. Former President of the Kennedy Group, a Consulting and executive Search Company located in Westport, Connecticut.

1.6.3 Technical Staff

Dr. Horia Chiriac, Magnetics & Microwire Research Specialist – Educated and earned advanced degrees in Romania. Presently Director General of the Romanian Institute for Physics in Iasi. Dr. Chiriac is the inventor of amorphous alloy microwire processing and products and is considered to be one of the leading experts in the world in this field. Extensively published technical articles and has numerous patents to his credit internationally.

Dr. Alexis Clare, Glass Research Specialist – Professor of Glass Science and Director of Industry/University Center for Bioceramics at Alfred University.

Dr. Xingwu Wang, Electronics Research Specialist – Professor Electrical Engineering at Alfred University.

Mr. Michael Bethea, Security Market Specialist - Veteran of the security products industry. BS, Rochester Institute of Technology.

1.7 Use of Funds

The principal stockholder and founder of the Company invested \$50,000 to cover infrastructure building through July of 2002. Infrastructure building includes planning, patent applications, and organizational structure. The principal stockholder has continued to provide funds, on a loan basis, until outside funding is acquired.

Numerous technical publications and patents support proofs of concept, process, and use in a variety of applications. Accordingly, DEMOD is seeking research grants from the US and/or State Governments: NYSTAR (New York State Office of Science, Technology and Academic Research) / ATP (Advanced

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Technology Program) / DARPA (Defense Advanced Research Projects Agency) upwards of \$1 million for R&D of improved casting technology, encoding methodologies, and the development of prototypes for EAS applications. The development of an EAS prototype will demonstrate the efficacy of the technology. Engineering assessments indicate that μ -Fiber microwire production processes can be transferred from Romanian to US facilities and be operational within 120-180 days. The first delivery of prototypes for field trials will ship to a customer within 90-100 days after the initial production of μ -Fiber microwire.

The Company is seeking an outside equity investment of \$14 million. This investment will cover operating expenses of the Company through the end of 2006. The Investment will provide expansion of the senior management team, a Production Prototype and further development of the DMOD System for Secure Environments, and the administrative, manufacturing and distribution capabilities to build a viable global business.

Use of Funds					
(in thousands)	2003	2004	2005	2006	2007
Category:					
Sales & Marketing	\$1,600	\$5,000	\$12,000	\$70,000	\$300,000
Capital Expenditures	(\$73)	\$1,180	\$3,560	\$30,700	\$154,000
G & A Expenses					
Other	\$1,147	\$2,348	\$6,314	\$24,307	\$60,271
Total:	(\$1,220)	(\$1,168)	(\$2,754)	\$4,795	\$70,296

1.8 Key Financials

Five Year Summary Income/Expense					
(in thousands)	2003	2004	2005	2006	2007
Total Net Revenues:	1,600	5,000	12,000	70,000	300,000
Cost of Goods Sold:	\$1,673	\$3,820	\$8,440	\$39,300	\$146,000
Gross Margins:	(\$73)	\$1,180	\$3,560	\$30,700	\$154,000
Total Operating Expenses	\$1,147	\$2,348	\$6,314	\$24,307	\$60,271
Pre-Tax Income	(\$1,220)	(\$1,168)	(\$2,754)	\$6,393	\$93,729
Fed Tax Provisions	0	0	0	1,598	23,433
Net Profit:	(\$1,220)	(\$1,168)	(\$2,754)	\$4,795	\$70,296

Note: "Year 1" starts upon completion of the Proof of Concept project – full prototype certification

*Demodulation LLC Proprietary and Confidential Information***1.9 Profitability**

We expect the μ -Fiber microwire business to show a solid growth pattern over the next five years, generating a 31% pre-tax profit in year 2007. The integration of research and development facilities at Alfred University involve more expense than revenue in the first and second years, but will turn profitable by the third year. Competition from Sensormatic (the leading competitor) is expected to be strong in the second year. Therefore, μ -Fiber microwire will be priced to achieve significant market penetration and to give DEMOD a price-competitive edge. This will lower overall profit margins in the near term, but should position us well for long term growth and profitability. To establish μ -Fiber microwire R&D and production facilities, Demodulation estimates its capital needs at \$20 million. This capital requirement would transition the company after three years to profitability and positive cash flow. Sales are projected to be \$25 million in 2005 and \$300 million in 2007.

Gross Profit Margins			
	Typical Retail Label	DEMOM μ-Fiber EAS Tag	Source Tagged* EAS μ-Fiber
Retail Selling Price	\$0.053	\$0.010	\$0.073
Cost to Manufacture	\$0.040	\$0.005	\$0.053
Gross Margin	25.0%	50.0%	27.5%
Gross Profit	\$0.013	\$0.005	\$0.020

* μ -Fiber embedded in a label.

The above chart reflects a four-fold increase in gross profit for a source tagged EAS label using μ -Fiber microwire. Although the gross margin is higher for our DEMOD μ -Fiber microwire EAS tag, the gross profit is less. Furthermore this chart clearly shows the importance of incorporating label manufacturing into DEMOD. This will dramatically impact the gross profit as shown.

*Demodulation LLC Proprietary and Confidential Information***2 The Company****2.1 Genesis of Demodulation LLC**

Dr. Liebermann and Mr. O'Keefe had a long-standing professional relationship while working for different companies. This relationship evolved during a contracted program to enhance the properties and improve efficiencies of acoustomagnetic EAS systems. Because of this collaborative work, an intimate knowledge was gained about the deficiencies and limitations of existing EAS technologies. As a result, Mr. O'Keefe sought out and identified a revolutionary process for the production of a unique form of amorphous alloys: glass-coated microwire. The use of this material form in EAS applications was found to be not only feasible, but advantageous. Recognizing the potential features, advantages, and benefits of using microwire in variety of applications, Demodulation LLC was found by Mr. O'Keefe to capitalize on this opportunity.

2.2 Evolution of Management Team

An appreciation of the technical potential of glass-coated microwire by Dr. Liebermann resulted in his joining the Company. Mr. O'Keefe and Dr. Liebermann both recognized the need to add EAS applications skill sets to the Company and asked internationally renowned physicist Dr. Hasegawa to join the Company. Based on a technical understanding of the function of the glass coating of the microwire, Mr. O'Keefe recognized that his alma mater, Alfred University, would provide an excellent skill base in the area of glass science and technology. Dr. Bill LaCourse, who heads the NSF Center for Glass Research at Alfred, thus became part of the Management Team. After licensing the microwire technology from the National Institute of Research and Development of Technical Physics (NIRDTP), Dr. Horia Chiriac was asked to become a technical advisor on magnetism for the Company. Other members of the Management Team, found through professional relationships, were asked to join the Company. Each of these professionals brings a complementary set of skills. Dr. Liebermann, Dr. Hasegawa, Mr. Harrison have all worked together in the field of magnetic amorphous alloys.

2.3 Investment of Funds by Founder

The principal stockholder and founder of the Company has invested over \$50,000 to cover infrastructure building to the present time. Infrastructure building includes business planning, licensing, patent evaluations, and development of organizational structure.

2.4 Equity Funding

The Company is seeking an outside equity investment of \$14 million. This investment will cover operating expenses of the Company through the end of 2006. The Investment will provide expansion of the senior management team, a production prototype and further development of the DMOD System, and the administrative, manufacturing and distribution capabilities to build a viable global business. The Company is also seeking research grants from the US or State Governments upwards of \$6 million (US Dollars*) for the development of non-encoded and encoded *working prototypes*. The purpose of the working prototypes is to prove the efficacy of the technology. Initial projections indicate that a production prototype can be developed within 90 days after the completion of the proof of concept R&D, with first customer shipment of product within an additional 90-120 days or shortly thereafter. As an interim step, the Company may seek one or more Angel investors.

*Demodulation LLC Proprietary and Confidential Information***2.5 Present Capitalization**

Mr. O'Keefe is presently the only investor; present distribution of shares in the Company, if all vested options were exercised, is as follows:

Shareholder	Contribution	Shares	Ownership
James O'Keefe	Founder	N/A	100%

2.6 Pro Forma Capitalization

An integral part of the successful completion of capital funding negotiations will include reorganization of the Demodulation LLC.

Post money shares of ownership, that is, after raising \$20 million will be:

Shareholder	Contribution	Shares	Ownership
O'Keefe	Founder		
Liebermann			
Wilkerson			
LaCourse			
Cuneo			
Reda			
Hasegawa			
Employee	Option Pool		
New Investor			

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2.7 Legal Structure

Demodulation LLC is a limited liability company that was incorporated on January 2002 in the State of New Jersey.

2.7.1 Intellectual Property Rights

Demodulation LLC has a partnership with Alfred University and with the National Institute of Research and Development for Technical Physics (NIRDTP), a Romanian institute. Most importantly, DEMOD has secured from the NIRDTP, the inventor of microwire technology, an exclusive, worldwide license for glass-coated microwire production, processing, and applications. The term of this Licensing Agreement is for the life of the patents.

The following is the opinion of Mr. Tom Gallo Esq., patent attorney for Alfred University, NY and former examiner for the United States Patent Office, following his preliminary review of our licensed patents:

“...based on my meetings with you and my limited study of the known prior art, the Company is entitled to the fairly broad claims. ...The claims of the issued U.S. Patent and also various patent applications, in my opinion, define your invention over the known prior art and should also serve as fairly broad protection for your invention”

Most research and development activities will be conducted at Alfred University. DMOD has agreements with the University that assign Intellectual Property rights related to all aspects related to the production and commercialization of microwire.

Mr. O’Keefe has traveled to Israel to evaluate microwire processing in a small prototype facility and witnessed laboratory-scale processing. The microwire produced was evaluated for EAS applications. At first, DEMOD was interested in working with this group. However, after extensive research, dialogues with world experts, and an exhausting review of the patent literature, it was apparent that Dr. H. Chiriac of the National Institute of Research and Development for Technical Physics in Romania had invented the glass-coated amorphous microwire process. With this revelation, DEMOD negotiated an exclusive, worldwide license for his patents.

2.7.2 Patents:

A process patent for production of microwire having amorphous alloy core have been originally filed by Dr. Horia Chiriac in the United States in June of 1996. An application with the PCT was also filed that year. The assignee for the Chiriac patent is the National Institute of Research and Development for Technical Physics in Romania. Demodulation LLC has licensed the rights to this process for the life of the patents. Dr. Chiriac in 1996 also co-authored a lengthy dissertation on the fundamentals of manufacture, physics, and properties of microwire. This published document proves the basic technology and clarifies the working of microwire for DEMOD. Since this report is the foundation for our development efforts, it is attached in this Business Plan as a separate Appendix.

We believe however, that this patent will be a non-relevant once development is complete at Alfred University per Phase I of the Technology Development Plan. We believe that Demodulation will possess the dominant technology in the world market for EAS systems, and revolutionize the anti-theft market with encoded technology according to the technology plan.

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Patents licensed by Demodulation LLC from the NIRDTP for production of microwire include:

Patent No: US 6,270,591 B2

Date Aug. 7 2001

Amorphous and Nanocrystalline Glass-Covered Wires

Abstract: This invention refers to amorphous and nanocrystalline magnetic glass-covered wires. The wires consist of metallic amorphous or nanocrystalline core with diameters by the order of 10^{-6} m, having compositions based on transition metal-metalloids and other metals and a glass cover, having a thickness of the wall by the same order of magnitude. The wires present high or medium saturation induction, positive, negative or nearly zero magnetostriction and values of the coercive field and of the magnetic field of electronics and electrotechnics to achieve sensors, transducers, inductive coils, transformers, magnetic shields, devices working on the basis of the correlation between the magnetic properties of the metallic core and the optical properties of the glass cover.

United States Patent Application 20010001397

Amorphous and Nanocrystalline Glass-Covered Wires and Process for Their Production

Abstract: The invention refers to amorphous and nanocrystalline magnetic glass-covered wires and to a process for their production. The wires consist of a metallic amorphous or nanocrystalline core with diameters by the order of 10^{-6} having compositions based on transition metal-metalloids and other additional metals and a glass cover having a thickness of the wall by the same order of magnitude. The wire present high or medium saturation induction, positive, negative or nearly zero magnetostriction and values of the coercive field and of the magnetic permeability in function of the requested application. The amorphous and nanocrystalline glass-covered wires are utilized in electronics and electrotechnics to achieve sensors, transducers, inductive coils, transformers, magnetic shields, devices working on the correlation between the magnetic properties of the metallic core and the optical properties of the glass cover.

International Application Published under the Patent Cooperation Treaty (PCT) with the International Publication Number WO 97/24734 for the invention entitled "Amorphous and Nanocrystalline Glass-Covered Wires and Process for Their Production", having the International Application Number PCT/RO96/00009, for the following Designated States: CA, CZ HU, JP, MD, PL, RU, SK, US, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, (the last 17 covered by European patent);

Notice of Allowance issued on 2001/10/18 by Canadian Intellectual Property Office for the Application No. 2,241,220 filed on 1996/11/12 regarding the invention entitled "Amorphous and Nanocrystalline Glass-Covered Wires and Process for Their Production"

2.8 Current and Future Facilities

As of today, magnetic research is conducted at the NIRDTP in Iasi, Romania. Corporate R&D facilities are being established at Alfred University in New York State. The Corporate office is in northern New Jersey. Our future plans call for encoding development and manufacturing to occur at Alfred, NY. Technical applications development will be performed in New Jersey. Consideration is being given for the establishment of manufacturing operations in Romania. This operation will be limited to non-security products. Locations for manufacture of antenna/receivers will be determined depending on the kind of funding/subsidies received, and on who the electronic joint venture partners will be.

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2.9 Exit Strategy for Investors

The Company sees two potential exit strategies.

2.9.1 Initial Public Offering

If the Company is successful in addressing the commercial marketplace with the commercialization of what is essentially an EAS product, it is possible to look towards an Initial Public Offering (IPO) within five years. If the only presence were in the Government Security Market, and much of that within classified space, the major customer (USG) may be hesitant to authorize an IPO. However, if significant commercialization is in place, an IPO may be possible.

2.9.2 Private Sale

The Company will identify potential purchasers to whom the purchase of Demodulation LLC would fit their strategic plans. This could be another government contracting organization, such as Grumman or Lockheed, or organizations that are in the commercial sector and wish to go into the defense and/or security field, or those in the defense/security field who wish to enter the commercial security industry.

3 Products and Services

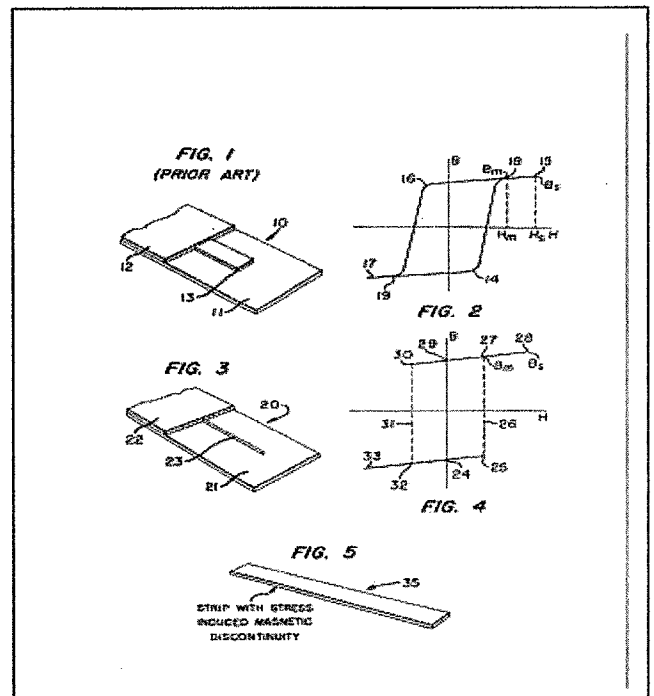
The initial primary products of Demodulation LLC are:

3. *μ -Fiber* microwire having alloy and glass chemistries and diameters to meet the needs of specific applications.
4. Value-added products such as:
 - EAS tags, fabrics, and labels
 - Sensors & transducers
 - Inductive components
 - EMI & RFI filters
 - Radar absorbing materials
 - Magnetic filtration

3.1 The Basic EAS *μ -Fiber* Microwire

A magnetic *μ -Fiber* microwire-based tag is used as a marker in article surveillance systems. This marker is comprised of a magnetic element formed by at least one *μ -Fiber* microwire piece made of amorphous alloy-containing material coated with glass. The *μ -Fiber* microwire piece has substantially zero magnetostriction, coercivity substantially less than 10 A/m, and permeability substantially higher than 20,000. An illustrative representation of some possible configurations is shown. A defining feature for *μ -Fiber* products is illustrated in Fig 4. In comparison with Fig. 2, Fig. 4 shows much sharper corners of the magnetization curve, which indicates greater magnetic harmonic content. This feature is the basis for increased performance, reliability, and marker detectability (increased aisle width).

Preliminary testing has been done in Romania for single strand microwire that had been tested with and antenna/receiver system. Dr. Liebermann had witnessed this testing during his visit to the NIRDTP in April, 2002. The system had a gate width of about 40 inches and was a go/no-go type. The results provide us with the confidence that a single strand EAS tag is feasible. Additional testing has been conducted using magnetic field coils and a bench-top system in the United States and the results are in keeping with those obtained in Romania. We are confident that the performance of microwire can be enhanced to meet the operational requirements of commercial EAS tags



*Demodulation LLC Proprietary and Confidential Information***3.2 Electronic Article Surveillance (EAS) Systems**

EAS systems are used to electronically detect goods that have not been authorized when they are removed from a retailer. The systems comprise a tag attached to the goods and a sensor mechanism. The retailer can neutralize the tag when he wishes to authorize the removal of the goods, for example when the items have been legitimately purchased. In effect, EAS systems are single bit RFID systems, able to convey their presence, but not having sufficient data capabilities to convey an identity.

Presently there are four major technologies used for EAS systems:

- Microwave
- Magnetic (harmonic)
- Acoustomagnetic
- Radio Frequency

Market penetration is currently estimated at 6 billion tags per year at \$0.04-0.12 each. The different EAS technologies have widely differing performance in the issues of price, reading range and reliability. The magnetic and radio-frequency versions are less costly and are generally attached permanently to the goods or their packaging, while the microwave tags are expensive and are removed by the store personnel when the item is paid for using a special removal tool. Markers that are left on the goods and neutralized by the sales staff are called deactivatable.

One type of deactivatable marker in the form of an electronic circuit comprises inductance and capacitance elements that resonate at radio frequencies. Another type of marker - a magnetic marker - comprises a strip of soft magnetic material that interacts with a ferromagnetic element made of a hard magnetic material that can be magnetized or demagnetized. The soft magnetic strip resonates and generates harmonics in the presence of a magnetic field having a certain frequency. This allows the marker to be identified. The hard ferromagnetic element can be magnetized or demagnetized thereby deactivating or activating the marker.

Another type of marker is the acoustomagnetic or magneto-mechanical marker. This type of marker comprises a strip of magnetostrictive material and a strip of magnetic material of high coercivity. The magnetostrictive material resonates mechanically in the presence of a magnetic field of a particular frequency. A receiver sensitive to the magnetic field created by the mechanical resonating magnetostrictive material can detect this resonance. Modifying the magnetic bias of the strip of magnetic material deactivates the marker.

The above systems are commercially available from many competing suppliers.

EAS is a simple addition to electronic RFID systems the developments of which have been announced but are as yet still not commercially available. The advantage of such systems with regard to EAS, is that

- they would broadcast not just the presence of the item triggering the alarm system, but the actual identity of the product
- they would be turned on and turned off by command allowing the same tagging system to have application at all stations from the manufacturer, through the distribution channels, to the retailer
- control of the tag would not be conspicuous, being incorporated into the reading protocol; rather than the obvious magnetic pads currently used by some retailers that can corrupt the in-credit cards.

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- as the system uses radio communications, the tags can be packaged inside the goods keeping the goods from being removed while the boxes with the conventional EAS tags remain behind in the store.
- the EAS features are incorporated in the identification and tracking system for virtually no additional cost.

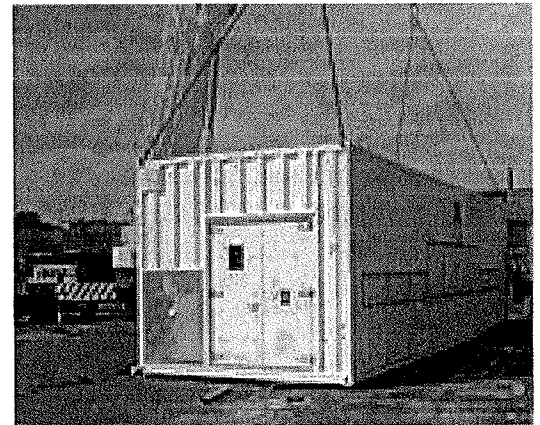
3.3 μ -Fiber Microwire & Miniaturization

EAS systems operate with an interrogation zone (usually defined by a magnetic dipole antenna pair) near the entrance or exit to an area to be secured. When a suitable object (a tag, marker, or label) perturbs the magnetic field in the interrogation zone, the system is alerted. The tags of interest here are magnetic. Other equipment and magnetic objects in and around the interrogation zone must of such a nature that it can be resolved from the signal produced by the drive antenna and distinguished from noise

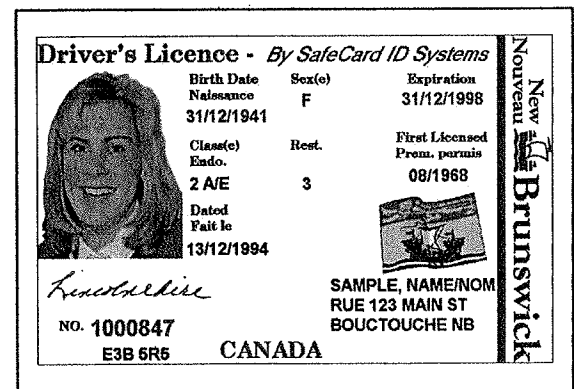
μ -Fiber microwires are magnetic amorphous alloy fibers having very small diameter and are typically produced using the process of glass-coated wire drawing. Given the small diameter, amorphous microstructure, and appropriate chemistry of the alloy core, such wires are ideally suited for EAS applications.

3.4 The μ -Fiber Microwire Container Tracking System

The application of μ -Fiber microwire is ideally suited for authentication of product shipments through customs. The utilization of μ -Fiber microwire in this application is manifold. One of the perceived methods of utilization is to produce a specialized marker that is applied to the surface of the container at time of shipment. This marker then becomes a part of the container during transit and is readable remotely.

**3.5 The μ -Fiber Microwire Personal Identification Card**

One of the premier markets for the μ -Fiber microwire technology will be for security cards and remote access products. In order to properly position the microwire technology, Demodulation will simultaneously develop and integrate ID card technology with microwire technology. An example of such an application is shown at the right. It is a step in the value-added process that will not only allow prototype development but will secure our technology in the US market. The integration of μ -Fiber microwire technology into personal identification cards will provide enhanced security that is tamper-proof. Additionally, the utilization of μ -Fiber microwire will enable remote authentication.



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3.6 Future Products

Demodulation LLC will develop many new product offerings such as value-added products for security applications and encoded products scheduled for availability early in 2004 and 2005. The demand for new technologies such as μ -Fiber microwire has never been greater. The timing for this product introduction is ideal, given the need for Homeland Security.

Our organizational structure and facilities will be evolving in 2002. In year 2003 we anticipate a capital expenditure to expand our research at Alfred University and to facilitate introduction of new products. This will cost about \$2 million. Our plan calls for \$5.7 million to set up manufacturing facilities. The primary growth of our Company will come from new products for retail, military, and Homeland Security applications. We anticipate improvements in the signal generation and antenna design, combined with improvements in the glass composition, which will result in a new generation of harmonic EAS tags and National security products. These developments will require expenditures, which are part of the \$5.7 million, for new equipment to support the sales and supply of products.

DEMODO plans specifically call for the roll out of new products as depicted in the table below. The products listed in Section 3.6.1 are included in our Revenue and Cost projections. Products listed in Sections 3.6.2 and 3.6.3 are *not* included. Although the products represented in Section 3.6.2 and 3.6.3 represent significant revenue generation, we have elected to maintain only an EAS product Revenue. Resource limitations preclude us from generating accurate data at this point in time. DEMODO will prepare business strategies and plans for non-EAS products after funding is complete.

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Additional new products will be completed, developed and introduced to the market as shown below:

Product	Year				
	2003	2004	2005	2006	2007
Electronic Article Surveillance (EAS)					
3.6.1 Retail Applications					
➤ Microwire development	Oct				
➤ Tag assembly/configuration		Oct			
➤ Antenna/gate system	Oct				
➤ Garments		Feb			
➤ Source Tagging		May			
3.6.2 Security Applications					
ID cards, drivers licenses			Mar		
Ticketing		Sep			
Security papers					
➤ Passports				Nov	
➤ Checks			Nov		
➤ Legal Documents				Nov	
3.6.3 Encoded Applications					
ID cards			Sep		
Driver's license				May	
Ticketing				Jan	
Security papers					
➤ Passports					May
➤ Checks				Nov	
➤ Legal Documents					Sep
Inventory control & management					Jan

These applications represent significant intervals of growth for the company and each phase of product introduction to the market will result in substantial sales. The successful implementation of each marketing phase will require additional capitalization.

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3.7 Advanced EAS Encoded μ -Fiber Product Definitions

Hybrid (mixed) technologies present possible opportunities for future new products.

“The next logical step is to add intelligent chips to the EAS technology.”

John Ryan, Vice President, Global Source Tagging
Sensormatic Electronics, Inc.

DEMODO's work in μ -Fiber microwire encoding will address such technologies effectively.

Advanced EAS μ -Fiber systems relate generally to an identification tag and particularly to an identification tag which can be encoded with multiple bits of information and that can be remotely interrogated and read.

Multi-bit remotely sensed tags are needed for retailing, inventory control and many other security purposes. For many applications, the cost must be low and the tags must be able to be individually encoded. Further, when the tag is interrogated, it must produce a distinctive signal to reliably identify the article to which the tag is attached or coupled. DEMODO is evaluating three distinctly different methods for encoding μ -Fiber products.

3.7.1 Geometrical Configuration

An array of μ -Fiber microwires having different combinations of diameters, lengths, and alloy chemistries. Alternatively, μ -Fiber microwires are situated in a non-planar configuration. Such methods have been well documented in the literature.

3.7.2 Magnetic Placement

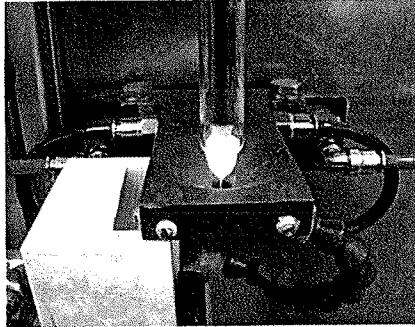
μ -Fiber microwire having a predetermined distribution of material having different magnetic properties. This approach has been proven and is well documented.

3.7.3 Phase Transformation

μ -Fiber microwire having selectively altered structure. This process option will be high-speed and controllable, resulting in *low-cost*. DEMODO is the creator and sole developer of this process.

*Demodulation LLC Proprietary and Confidential Information***3.8 Our Technology Edge**

The base technology is termed “harmonic” or “electromagnetic” and relies on a special manufacturing process to draw an amorphous alloy fiber which is encapsulated with glass in a one step process. The result is μ -Fiber microwire, the ability to encode information on the fibers and to extract this information digitally. With a sufficient number of bits, the wire can be interrogated to yield useful information such as what the product is, its date of manufacture, its price, and whether the product, article or person has been properly passed through a check out counter or kiosk. Each individual wire signature is so unique that it is almost impossible to replicate.



With this encoding process DMOD will revolutionize the retail industry and be applicable for tagging used in the road/air freight industries, personal identification tagging, pallet tagging in manufacturing processes, applications that require a tag for identifying a product, article or person in detail. Further, identifying a large number of products via tags can lead to a new type of check out system for the retail industry giving rise to the much hoped for “no-wait check-out”. Our technology is revolutionary in terms of processing and application, as well. Unlike conventional materials used in the anti-theft applications, microwires of amorphous

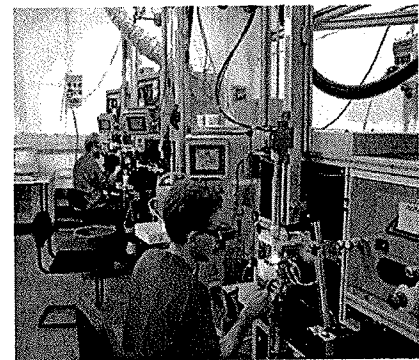
(nanocrystalline) alloys with thickness of 2-30 micrometers are adhered and/or applied to merchandise and are nearly undetectable. These wires are made to provide signals that are picked up by antennae located at either exits or at cash registers in retail stores.

Such wires have excellent magnetic properties at high frequencies and can be used in miniature electronic components, and for filtering of electromagnetic interference in printed circuits and cables.

Certain wires are characterized by a specific magnetic signature and therefore may be used in various security applications. These range from the well-known article surveillance (anti-shoplifting sensors) to the most serious ID and document protection.

Another group of wire is not amorphous and is characterized by conducting properties (copper, gold, silver) and therefore may be used in electromagnetic applications such as miniature coils, miniature cables, high voltage transformers and miniature antennas.

Yet another group of wires is characterized by radar absorption and can be used for military applications.

**3.9 μ -Fiber Microwire Basic Properties**

- Outside diameter: 10 to 220 micrometers - Metal diameter: 2 to 200 micrometers
- Amorphous Iron, Cobalt, or Nickel-based alloys.
- Glass coat thickness wall range: 1 micrometer to 7 micrometers
- Outside diameter tolerance +/-1 micrometer for 24 micrometer wire.
- Typical tensile strength: 1-2 GPa. (15-micrometer diameter core)
- Maximum elongation before break: 1.5%
- Coercivity values: 0 to 400 A/m
- Corrosion resistance: Resistant to humidity, seawater, alkali, acids (save hydrofluoric acid), and organic solvents.

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3.10 μ -Fiber Microwire Ease of Use

- High-speed dispensing/attachment capability (cost savings to customers)
- Small size of product facilitates its utilization in source tagging applications.
- Source tagging is considered to be the trend for future anti-theft applications.
- Source tagging: integrating EAS element directly into packaging, labels, or eventually the merchandise itself. μ -Fiber microwire is ideally suited for such applications. The retailer incurs no costs associated with tag application (tag purchase, inventory, dispensing).

3.11 μ -Fiber Microwire Visual Appeal

Virtually invisible (about 10% thickness of human hair)

- Undetectable (consumers unaware of its presence)
- Difficult to detach from retail merchandise
- Can be directly sewn into garments
- Can be directly dispersed into paper during its manufacture (i.e. invisibility)

3.12 Features, Advantages, and Benefits Comparisons

3.12.1 Alternatives

The main reason Demodulation was formed was that the label and retail industry did not have a good alternative to existing anti-theft products and systems available in the marketplace.

Our offerings will have lower cost and have better performance than those currently available. In the long run, this results in a more cost-effective product and a more satisfied customer. Selling the manufacturer on that concept is our major task.

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Acceptance and demand for μ -Fiber microwire-based products and technology will be self-perpetuating as potential customers begin to realize its value, as shown below.

Demodulation vs Major Competitors				
	Demodulation	Sensormatic	CheckPoint	Wallace
Cost	\$	\$\$\$	\$\$\$\$	\$\$\$
Performance				
Gate Width	***	**	***	**
Gating Angle	***	**	***	**
Functional Integrity	***	*	***	*
Tag Size	***	*	*	*
Tag Visibility	***	*	*	*

Value to Customer: *** = high; ** = Medium; * = Low

- Gate Width is defined as the maximum distance the EAS tag will be functional from the receivers.
- Gating Angle is the sensitivity based on the positioning with respect to the angle of the EAS tag to the receiver.

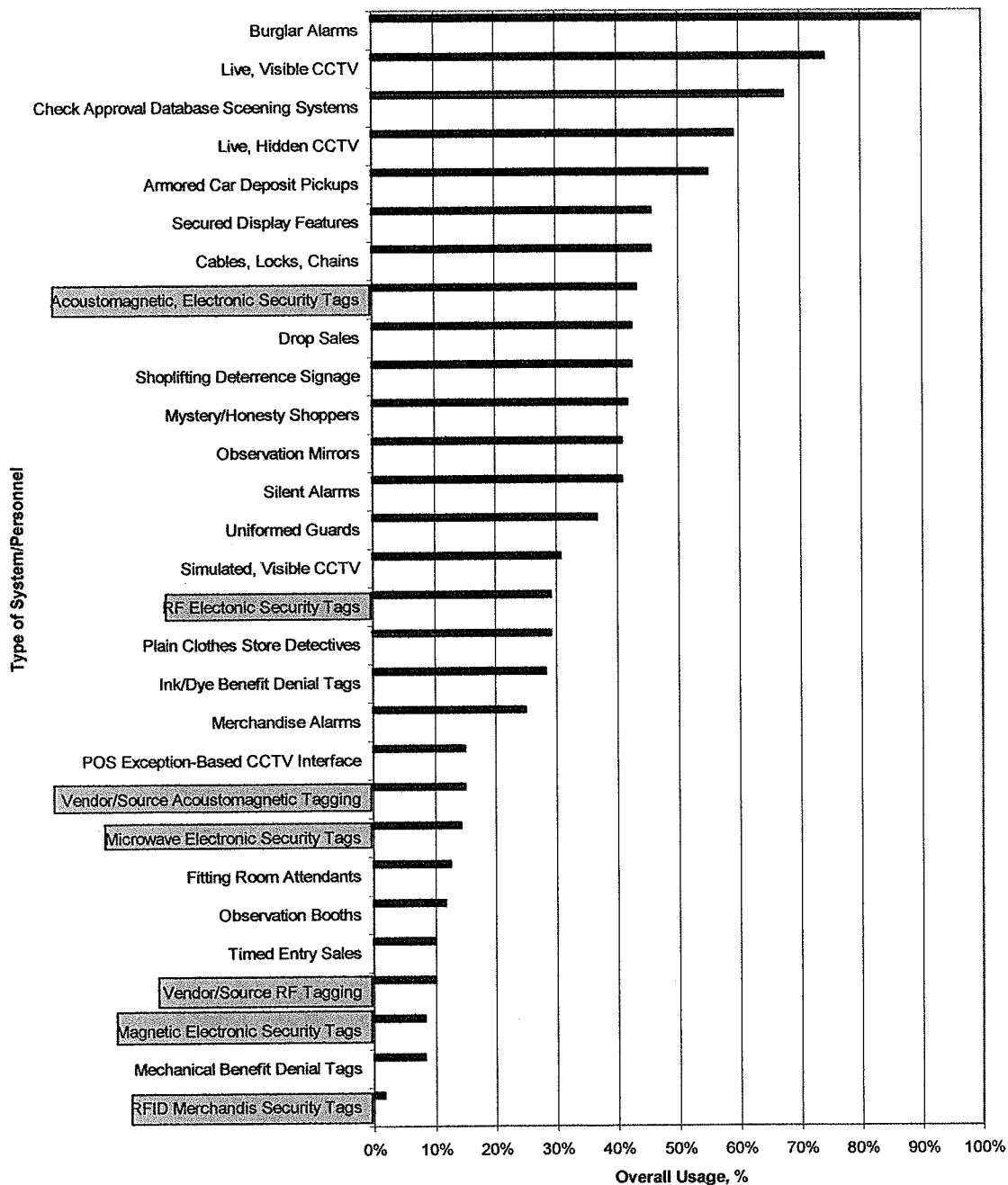
3.12.2 Limitations of Competing Products

Limitations of competing technologies are summarized below.

Competing technology	Limitations
➤ harmonic	➤ Size, performance, cost
➤ resonant	➤ Application Cost, visibility, size
➤ RF	➤ Application Cost, size
➤ RFID	➤ Very costly

*Demodulation LLC Proprietary and Confidential Information***3.12.3 Loss Prevention Systems**

A graphic representation of currently used loss prevention systems/personnel is shown below. DEMOD's primary competitors are highlighted. This data depicts the usage, expressed in percent, of each system/personnel for the overall market.

Use of Loss Prevention Systems/Personnel

Data provided from 2001 National Retail Security Survey (R. Hollinger, University Florida)

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The primary competitors in the EAS market are Sensormatic and CheckPoint. Both of these companies maintain average profit margins and dominate the market. The combined sales of both companies are estimated to approach \$1.9 billion. It is estimated that the Global EAS market turnover is about \$3 billion of which Checkpoint and Sensormatic supply more than 60% of the product. Sensormatic claims that 96 out of the top 100 retailers in the US use their technology. The technology used in EAS systems are broken into three categories – R.F. (Radio Frequency), A.M. (Acoustomagnetic) and E.M. (Electromagnetic). Checkpoint uses R.F technology while Sensormatic uses A.M. technology, both of which are patented technologies. Sensormatic patents will expire in the year 2002, which should open market opportunities. E.M. technology is emerging and is used primarily in Europe, however it is a much more competitively priced technology. Traditional EAS tags produced by Sensormatic Corporation currently sell for \$.025 versus \$.010 for the E.M. products.

Sensormatic and CheckPoint have established excellent credibility in the marketplace. These two competitors of Demodulation LLC have extensive experience and have supplied integrated EAS systems (both tags and electronics). Sensormatic has a very strong commitment to developing new products and applications for the EAS market. However, current conditions (acquisition by TYCO) place them in a position that, if necessary, will cause them to restructure the company due to poor cash flow. CheckPoint Systems, an RF tag producer, experienced 86.5% growth in year 2000 and controls 42% of the EAS market. They have tremendous skills to successfully compete in the market and, if history is any indicator, they will respond to our market entry efforts in an aggressive manner. The remaining group of competitors listed section 5.1 are not anticipated to pose the challenges of Sensormatic and CheckPoint. All of the competition has failed to produce a product that meets the needs of the source tagging industry. Currently available products do not meet the requirements of this application.

The Company believes that DMOD Systems will be used for three general reasons:

- Price
- Versatility in Applications
- Concealability

3.13 Logistics

The retail industry will be able to forecast demand 3-6 months prior to release of product. Historical trends for retail forecasting have for the most part have been reasonably accurate. Therefore, providing a basis for production lead times of microwire products to meet customer delivery requirements. Demodulation LLC will adopt a Just-in-Time delivery model after appropriate production capacity has been installed. DEMOD will implement a comprehensive on-line order entry system, compatible with the leading initiatives i.e. Commerce 1 and Ariba to allow our customers to integrate directly into the order entry process. This will assure up to date schedule release and inventory requirements. We will further augment this ability with strategically located distribution centers located in each of the 5 sales regions.

Warehousing and transportation of the *μ-Fiber* microwire product can be handled by currently available freight methods. Because of the sturdy construction and density of packing, large volumes of product can be shipped in relatively small volumes of space, without fear of damage or degradation of product. The actual weight of an EAS tag is feather light and therefore the cost of shipping is not a factor. Furthermore, the products viability does not require special HVAC, humidity, or other types of environmental atmospheres to be stored for long periods of time. The microwire product's shelf life is virtually infinite, therefore allowing Demodulation LLC to manufacture in one location to ship around the world.

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All Products will be shipped FOB-Plant and/or distribution center.

3.14 Customer Support

DEMODO will have a dedicated Customer Service group. This staff will be responsible for managing all aspects associated with customer service and support. An engineering support staff will provide on-site technical support and resolve quality assurance issues. The engineering support staff will provide rapid response to all customer inquiries.

Our non-encoded *μ-Fiber* microwire product line will have a 90-day tolerance specification warranty and a one-year "materials integrity" warranty. No maintenance is required, only replacement. Our shipping department will handle any returns. Demodulation LLC will have a one-year warranty on parts and workmanship for our antennas, transmitters and receivers. Repairs for products out of warranty will be on a "for profit" basis.

Our development program has the objectives of providing new products for the market, improving applications that already exist and insuring that we employ the most effective manufacturing techniques possible.

Research and Development team will also rely upon the feedback from Sales and Marketing for overall customer satisfaction and cost versus performance analysis.

3.15 Schedules

Our production volumes will increase dramatically in the first five years. Our facilities and equipment will accommodate the first three-year's projected growth, but will have to be expanded for any growth beyond that. We will also be introducing an assembly line and a new manufacturing process for Demodulation LLC in 2005. This requires capitalization, new equipment, personnel, and procedures.

4 Manufacturing Operations and Technology

4.1 Operations

Demodulation LLC although established in 2002 is a start-up company. The company has no assets, however, has been structured to facilitate the integration of recently developed technologies in Romania into EAS, anti-counterfeiting, and Homeland Security applications. This organization provides the intellectual and technological resources required to commercialize this microwire technology.

The manufacturing operation is the "backbone" of Demodulation LLC. The manufacture *μ-Fiber* microwire, and assembling these to pressure sensitive substrates combined with a hard magnetic ribbon, is an ultra-high speed and extremely reliable process. The operation is completely automated and will be managed by various experienced personnel, using state of the art equipment and employing the most sophisticated quality control/computer monitoring systems available. This process will not be labor-intensive nor will it require highly educated personnel to operate. Because some aspects of the operation are unique (and patented) to Demodulation LLC, limited access to personnel will be given and all training will be performed in-house. For the encoded products manufacturing operations, access will only be permitted to personnel who have been screened through the intelligence community.

The Romanian microwire production equipment is capable of manufacturing 10-micrometer diameter wire at speeds of about 1- 10 meters per second. The machine capable of delivering this throughput is valued at \$100,000 US. An automated assembly process to manufacture harmonic anti-theft labels at high speed will need to be developed. The preliminary designs for this assembly equipment specifies running 20 strands of microwire. This automated assembly machine is capable of running a minimum of 20 strands of microwire simultaneously, which in turn results in 10 continuous strands of EAS devices

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made at a rate of 20 – 30 units/second. We estimate the cost of this equipment to be approximately \$250,000 US.

Today techniques for manufacturing tags for EAS are well known in conventional label (i.e. magnetic marker) manufacture. Suitable magnetic materials having high permeability are also well known and widely available. The magnetic material (amorphous) is preferably in the form of a long thin strip or of a film; these forms avoid major demagnetization effects due to geometric aspect ratio of the magnetic element. Suitable strip materials are available from commercial suppliers such as Vacuumschmelze (Germany), AlliedSignal (Honeywell), and Unitika (Japan). IST (Belgium) is currently manufacturing a thin film material for use in a specific application. None of the manufacturers currently make EAS devices and none of the EAS producers make amorphous alloys engineered glasses. This creates limitations in the development cycle and minimizes costs reduction.

DEMODO will produce its own master alloys and glasses for its μ -Fiber microwire production. The wire produced using our process can have high or medium saturation induction, positive, negative or nearly zero magnetostriction. Furthermore, coercive field and magnetic permeability are consistent with the requirements of various applications.

The first two years capitalization costs for manufacturing are estimated to be no more than \$7.1 million dollars. The assembly equipment will be re-engineered for optimum performance and throughput. Preliminary equipment design calls for using 10 microwire feeds. However, we estimate that this feed system can be more than doubled, thus improving our efficiencies by more than 100%. The casting process will also be improved to more than double existing outputs.

*Demodulation LLC Proprietary and Confidential Information***4.2 Key Operational Timeline**

TASK	START	END DATE	STATUS
Phase I :Formation of Enterprise			
Establish Demodulation, LLC	Nov 01	Jan 02	Complete
Secure Romania License Agreement	Jan 02	May 02	Complete
Establish Alfred University Research Group	May 02	Jul 02	Complete
Phase II: Secure Funding			
Commercial Funding for Demodulation (\$20M)	Apr 02	Jan 03	
\$5.7M - Set up facilities-Alfred /offices	Jan 03	Mar 03	
\$1.8M – Assembly equipment	Jan 04		
\$1.8M – Manufacturing equipment	Jun 04		
\$3.75M – Manufacturing expansion	Jan 05		
\$3.75 M – Facilities expansion	Jan 06		
Federal Research Grants	May 03		
Phase III: Product Development			
Develop prototype product	Sep 02	Jan 03	
Beta site testing of EAS tags	Jun 03	Dec 03	
Develop encoded microwire	Feb 04	Feb 07	
Develop driver's license/credit, ID cards	Oct 04	Apr 05	
Phase IV: Operational Process Development			
Acquire/set-up wire casting capability	Jan 03	Mar 03	
Develop improved wire casting process	Sep 03	Jan 04	
Expand casting/assembly operations	Nov 03	Sep 04	
Increase EAS production capacity	Feb 05	Jul 05	
Phase V: Marketing			
Initiate J/V for Antenna/receiver technology	Jun 02	Mar 03	
Establish J/V w Romanian Mfg. Company	Aug 02	Dec 02	
Hire Five Regional Sales Managers	Feb 04	Apr 04	
Finalize Contract with Three targeted retailers	Mar 04	Dec 04	
Establish J/V with Source Tagging Company	Mar 04	Dec 04	
Establish international distribution agreements	Jun 04	Feb 05	

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4.3 Key Operations Events

- Establish a team of the leading professionals and scientists in the world in glass science, amorphous alloys, electronic materials and security products: Amorphous alloys scientists, Alfred University, Romanian Scientist and other personnel.
- File patent applications for new glasses and amorphous alloys compositions for use in DEMOD product.
- Successfully integrate the Research and Development of the US based scientist with the current manufacturing capabilities of the Romania (NIRDTP) scientists.
- Upon successful integration, prioritize and manage the successful development of products that will expedite the commercialization of the microwire anti-theft products.
- Develop improved glass composition that will enhance microwire properties and application performance in the field.
- Become the low cost producer of EAS anti-theft devices by adapting the technology developed by Romania (NIRDTP) and integrating the research and development capabilities in the US. Achieve a 50% reduction in cost through production efficiencies.
- Become the highest quality and most dependable anti-theft system producer in the world by capitalizing on the gating efficiencies of the microwire and improvements to the antenna systems.
- Introduce new products that are assembled and are valued-added. Increase margins significantly.
- Insure the successful development of a patentable product and/or process, providing the revolutionary product break-through that ensures industry recognition and market acceptance.
- Identify and establish joint research with electronics designers for the advancement of receiver and antenna technology.
- Identify and secure strategic partners / customers through joint ventures and co-marketing agreement to test market products and prove product effectiveness. Industry segments include paper, credit card, legal documents, ticketing, textile and label manufacturers, etc.
- Define Sales and Marketing Plan for facilitating sales growth and market penetration.

*Demodulation LLC Proprietary and Confidential Information***4.4 Technology Development**

Our development program has the objectives of providing new products for the market, improving applications that already exist and insuring that we employ the most effective manufacturing techniques possible. We will achieve these developmental objectives by incorporating revolutionary encoding processes and new manufacturing processing methods. Our product technology will be patentable. DEMOD may elect to patent these advancements or hold these as trade secrets.

4.4.1 Objectives**4.4.1.1 PHASE I - PERFECT THE MICROWIRE PROCESSING/PROPERTY-DEVELOPING TECHNOLOGY (JAN 03 – JUL 04).**

DEMODO's Research and Development team coupled with the Sales and Marketing group will perfect the product for widespread use. We will specifically develop improvements in the metallurgy, glass chemistries, and manufacturing processes in-house with enhanced features for market acceptance. DEMODO will simultaneously further qualify, quantify and enhance the performance of the microwire technology licensed from Romania.

Phase I of the Technology Development Program consists of the following steps:

- Integration of the Romanian Scientists with the Demodulation Research Team.
- Formalize Joint Partnership with Alfred University and the Ceramics Innovation Corridor.
- Establish the Corporate Offices and Center for Applications Development in New York City metropolitan area.
- Develop a comprehensive R&D program in conjunction with Alfred University that will:
 - Assess current product performance versus that of competitors offerings.
 - Evaluate and develop new glass compositions in combination with compatible amorphous alloy chemistries that will either improve manufacturing speeds, product quality, and/or performance. The following areas of applied research will be conducted.
 - Thermal Expansion - matching glass to metals
 - Surface Conditions - glass to metal interface
 - Amorphous Alloy Chemistries - modifications to match redeveloped glass compositions.

The successful completion of these development efforts will lead to a series of processes and product patents of μ -Fiber microwire for Demodulation LLC which will allow us to control the worldwide market for EAS products and applications.

4.4.1.2 PHASE II - PERFECT THE ENGINEERING DESIGN FOR HIGH SPEED MANUFACTURING PROCESSES FOR THE FABRICATION OF μ -FIBER MICROWIRE BASED ON THE ACHIEVEMENTS AND SUCCESS OF PHASE I. (JAN 04 – DEC 04).

- Introduction of multi-end casting technology.
- Development of high speed winding equipment (continuous)

*Demodulation LLC Proprietary and Confidential Information***4.4.1.3 PHASE III - OPTIMIZE THE EAS μ -FIBER MICROWIRE TAG FOR COMMERCIAL APPLICATIONS (JAN 03 – JUN 04).**

- Optimize tag construction in concert with development of antenna/receiver systems.
- Overcome limitations in performance of single strand or multi-strand EAS tags through enhancements of antenna/receiver systems redesign.
- Establish a partner for joint development of the electronic antenna/receiver systems.

4.4.1.4 PHASE IV - INTRODUCE THE PRODUCT TO THE BETA-TEST SITES (JUN 03 – DEC 03).

- Track and chart *μ -Fiber* microwire product in field application trials for continued product development.
- Make a go/no-go decision based upon data obtained from the customer application trials. The R&D team will also rely upon the feedback from Sales and Marketing for overall customer satisfaction and cost versus performance analysis.

4.4.1.5 PHASE V -ADAPT THE μ -FIBER MICROWIRE PRODUCT INTO ACCREDITATION APPLICATIONS (OCT 04 – APR 05).

This includes the introduction of *μ -Fiber* microwire into plastic laminations, which ultimately will be used in access control, credit cards, passports, and State / Federal I.D. credentials:

- Develop lamination process and compatibility of glass bonding to plastics.
- Determine optimum diameter and chemistry suitable for application.
- Determine volume and spacing for applications for *μ -Fiber* microwire segments.
- Optimize method for placement of *μ -Fiber* microwire segments onto substrates.

4.4.1.6 PHASE VI - ENCODING APPLICATION DEVELOPMENT (FEB 04 – FEB 07).

This technology relates generally to the EAS tag and more particularly to an EAS tag that can be encoded with multiple bits of information and which can be remotely interrogated and read. This work will commence once completion of the EAS system is achieved.

- Demodulation and Alfred University will secure federal funding for R&D for security / intelligence application development.
- Alfred University will secure New York State Funding for development efforts in the area of encoded products for security applications.
- Demodulation will establish a highly secure facility at Alfred University to perform the development activities of encoding.
- Development will proceed with selective activation of glass by laser methods which includes:
 - Doping of glass to accept laser treatment.
 - Photomask imaging and subsequent electroplating of hard magnetic materials.
 - Sequencing of multi-diameter *μ -Fiber* microwire segments, possibly in combination with *μ -Fiber* microwire segments having various metallurgical and/or glass compositions.

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5 The Market

“Employee theft, shoplifting, administrative error and vendor fraud continue to rob the nation’s retailers of billions of dollars; this loss translates into higher consumer prices and cost the nation’s retailers nearly \$26 billion annually, according to the just-released 1998 National Retail Security Survey”

Richard Hollinger

Professor, University of Florida Security Research Project

“Brand theft” robs brand owners of 15% to 35% of their annual revenue and costs brand owners as much as \$400 billion per year and is growing by about 15% per year.

BrandPackaging Jan/Feb. 2001

“... The mission of the Office will be to develop and coordinate the implementation of a comprehensive national strategy to secure the United States from terrorist threats or attacks. The Office will coordinate the executive branch’s efforts to detect, prepare for, prevent, protect against, respond to, and recover from terrorist attacks within the United States.”

George W. Bush,

President of the United States

As evidenced by the quotes above, the customer base for our component products is the multitude of retailers, OEM & label manufacturers worldwide who have tremendous needs for theft protection. We will concentrate our initial efforts in the United States and will be expanding our operations throughout Europe.

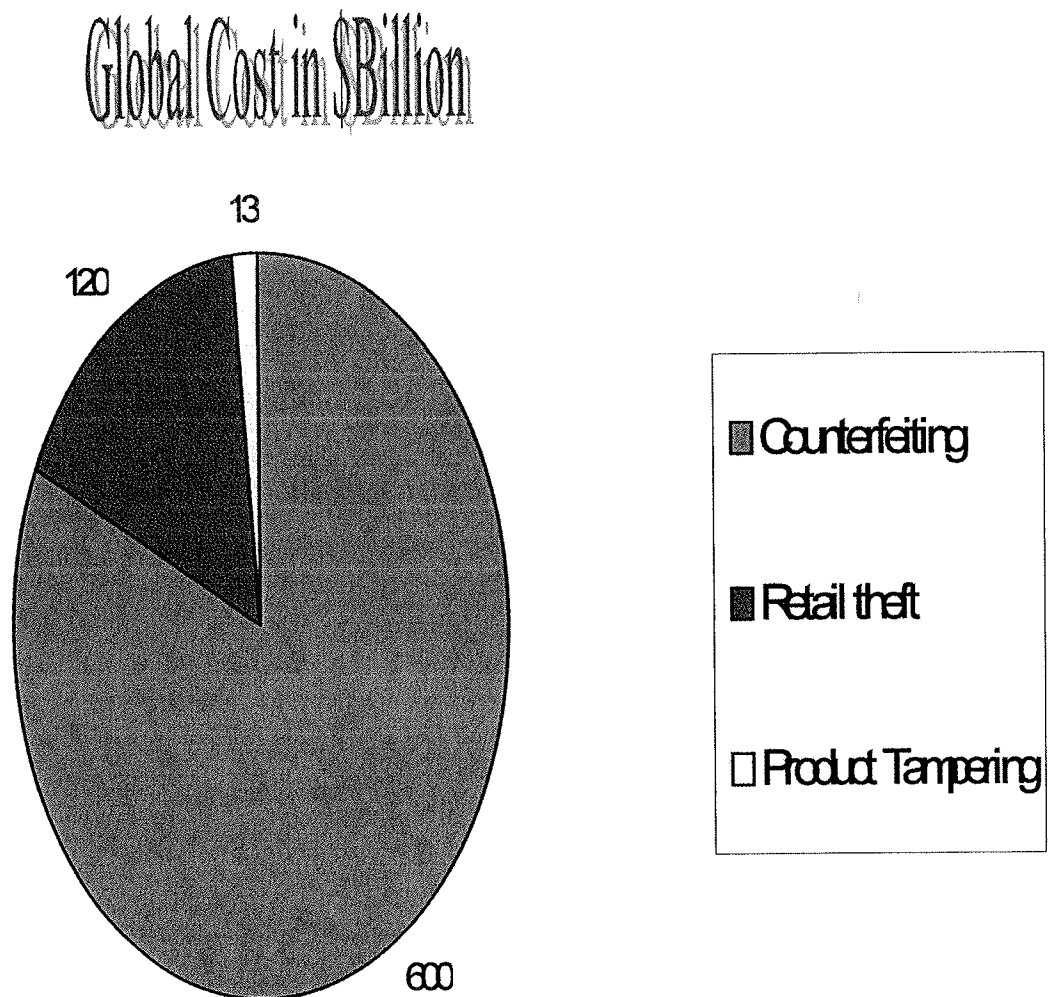
5.1 The Market

- Two suppliers dominate the global EAS market and accounted for \$1.9 billion of sales in 1999, and this is expected to grow 10 – 15% every year according to the Security Industry Association.
- At present, only 0.2% of sales is invested in EAS systems. Currently available products do not meet the needs of the market.

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5.1.1 Counterfeiting, Product Tampering & Retail Theft Data supplied by ACS, based on a worldwide market analysis published in 1998.

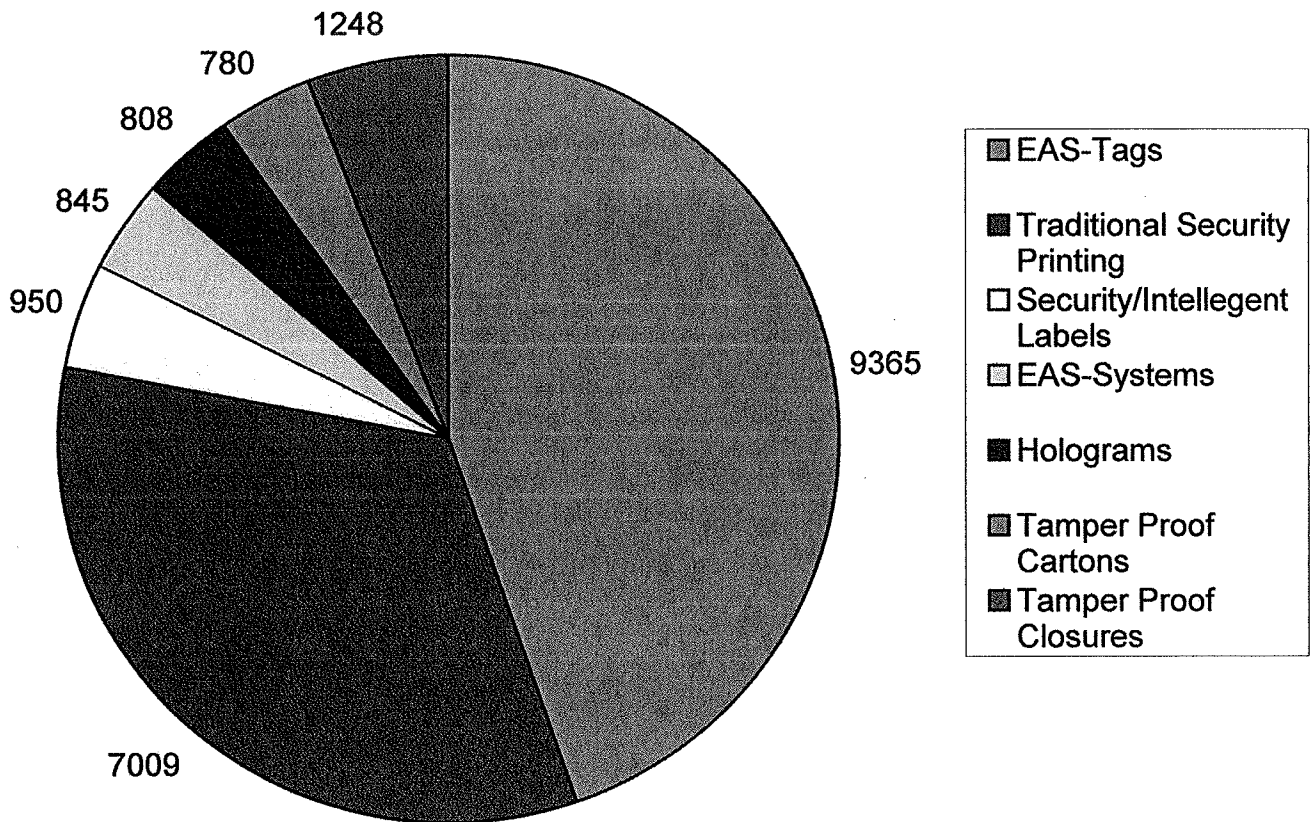
Counterfeiting Product Tampering & Retail Theft (increasing @15% per year)



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5.1.2 Product & Imaging Security Solution – Global Demand

**Product & Imaging Security Solution
Global Demand (units)**

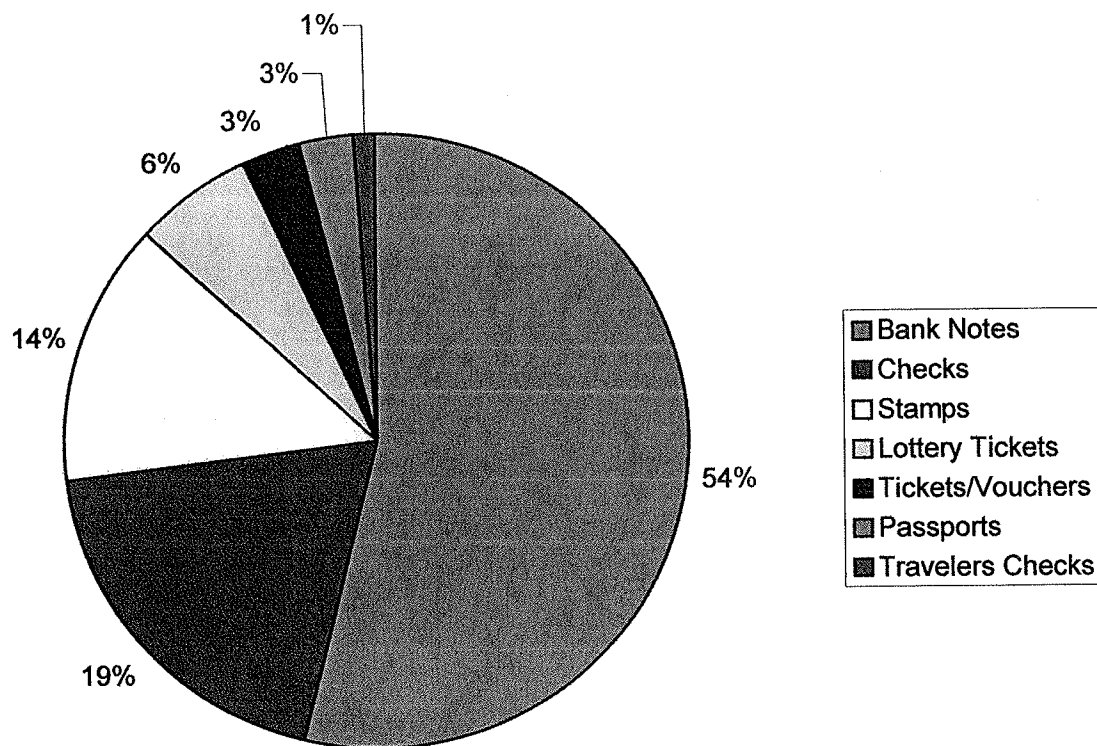


Units are expressed in \$M.

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5.1.3 Security Papers Market

Security Papers Market



Data supplied by ACS, worldwide market analysis.

Data is expressed as a percentage of multi-billion Dollar market.

*Demodulation LLC Proprietary and Confidential Information***5.2 Government Security Market**

In the USA, this would include Federal and State Governments and Legislatures as well as State and Local Police departments. Non-government users would include conference facilities at corporate campuses and hotel venues as well as sensitive R&D facilities. It is estimated the Government Security Market opportunity is estimated to be \$1.2 billion.

5.2.1 Products

The entire line of DMOD Systems is available for the Government Security Market. We will customize and provide proprietary products for the Federal Government as needed.

5.3 Sub-Markets**5.3.1 Standard Applications**

- Mirror commercial applications with the option of customization.
- Currency, treasury bills, highly secure documents including passports.
- National ID card, driver's license

5.3.2 Special Applications

- Insertion of fibers into humans for tracking and authenticating soldiers and intelligence personnel. The use of *μ -Fiber* microwire subcutaneously will provide the greatest level of access control and human identification.
- Radar absorption/stealth technology.
- Sensors & Transducers.

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5.4 Commercial Marketplace

5.4.1 The Global EAS Market

EAS systems and products represent one of the highest growth opportunities in the world today.

- Although they have penetrated over 80% of the US drug chain market there is still enormous potential development among other store types and in other countries.
 - The Retail theft amount is believed to be as high as \$60 billion each year worldwide.
-
- | | |
|---|---|
| ➤ Average Retail theft in the USA & UK: | 2% of store turnover
20 % of store profit |
| ➤ Major Suppliers/producers: | CheckPoint & Sensormatic |
| ➤ Global EAS market turnover: | Greater than \$3 billion |
| ➤ Product types in application | R.F. radio frequency (CheckPoint)
A.M. acoustomagnetic (Sensormatic)
E.M. electromagnetic (ACS) |
| ➤ Market trends: | Source Tagging |
| Counterfeiting, Product Tampering & Retail Theft | Hidden EAS Elements |

Global cost has been estimated to be \$733 billion in 1998 and is estimated to be increasing at a rate of 15% per year.

5.4.2 Market Conditions

Worldwide market conditions for new applications to enhance protection from forgery, fraud, brand abuse, and theft have never been more favorable. Governments, industry, and consumers are stimulating this demand for quality security solutions. Demodulation will provide many of the solutions to meet this overwhelming global need. Due to the prevailing world situation, the need for security solutions, such as those provided by our offerings, will only be greater in the future.

A commercial demonstration of the value/workability of a rudimentary offering has been provided by competitors Sensormatic and CheckPoint. The growth of these companies over the past decade has been dramatic. The environmental conditions of the marketplace are so strong that even offerings having less than optimal performance have found commercial success. Therefore, with the introduction of innovative products and processes, the market will embrace Demodulation's offerings and thereby create exponential demand.

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Most experts generally agree that the United States will adopt a standard national identification card. One of the premier markets for the microwire technology will be the national ID card. Other markets will include security cards and remote control access products. The encoding of microwires will be a breakthrough in this application and Demodulation will simultaneously integrate ID card technology with that of microwires. The replacement of a radio frequency (RF) chip by the microwire technology will result in savings of up to \$2 per card.

The trend towards use of more electronic/electromagnetic devices for use in security applications is a positive influence for the sales of our component products. Also military actions such as those having recently occurred creates a demand for more sophisticated "field" devices that require high performance electrical/electromagnetic components (e.g. security clearance, security documentation, sensors, personal identification).

Demodulation's products will be introduced to the marketplace as the public, commercial institutions, and government become more sensitized to the need for greater security.

5.4.3 U.S. Market Assessment

Comprehensive national retail industry surveys released by the University of Florida reveals retailers lost \$33.2 billion, or 1.80 percent of their total 2000 annual sales to a combination of employee and customer theft, administrative error and vendor fraud. Results of the National Retail Security Survey (NRSS) indicate employee theft and shoplifting have a multi-billion dollar impact on the economy. In 2000, American retail employees stole more than \$15.2 billion from their employers, while retail customers -- shoplifters -- are estimated to have stolen more than \$10.2 billion. In comparison to the results of last year's survey, losses attributable to shoplifting fell 1.9 percentage points.

- "Loss prevention executives attributed 45.9 percent of their annual shrinkage losses to employee theft, 30.8 percent to shoplifting, 17.5 percent to administrative error and 5.9 percent to vendor theft".
- "The retail market segments reporting the highest levels of losses were reported by "Other" Apparel (2.97%), Cards/Gifts/Novelties (2.66%), Shoes (2.46%), Men's apparel (2.43%), Household Furnishings (1.94%), Women's Apparel (1.94%), Department (1.94%), Drug (1.88%), and Discount (1.86%) stores".
- "The lowest levels of shrinkage were reported by Children's Apparel (1.79%), Sporting Goods (1.74%), Supermarket/Grocery (1.42%), Home Centers/Hardware/Garden (1.38%), Books & Magazines (1.20%), Recorded Music/Video (1.13%), jewelry (.78%), and last Consumer Electronics/Appliances (.069%) Chains".
- "Respondents reported an average loss of \$195 per shoplifting incident, \$1,445 per employee theft incident".
- "Fourteen loss prevention systems were used by at least 25% of the companies including: cables/locks/chains (45.8%), secured display fixtures (45.8%), acoustomagnetic, electronic security tags (EAS) (43.3%), shoplifting deterrence signage (42.5%), drop safes (42.5%), mystery /honest shoppers (41.7%), silent alarms (40.8%), observation mirrors (40.8%), uniform guards, (36.7%), simulated, visible CCTV (30.8%), plain clothes detectives (29.2%), radio frequency EAS (29.2%), ink/dye denial tags(28.3%), and merchandise alarms (25.0%)".
- Three Systems and personnel programs were slated for increased usage by at least 10% of the companies including acousto-magnetic EAS (14.2%), vendor source acousto-magnetic tagging (11.7%), and mystery/honesty shoppers (11.7%).

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The National Retail Security Survey projects that during the coming year shoppers will notice increased use of a number of new loss prevention technologies, including EAS tags and closed circuit television.

"A new generation of EAS tags are being deployed that incorporates the security tag inside the packaging materials or is built into the product itself," Hollinger said.

5.4.4 μ -Fiber Microwire Impact on the Market

DEMODO's μ -Fiber microwire products have many attributes necessary to cause the potential prospect to purchase it. These products have superior features, advantages, and benefits that provide Demodulation LLC with a unique technological edge in the marketplace. Our product features low cost coupled with flexibility of use and superior magnetic properties. The market trend is moving rapidly towards source tagging and conventional products are incapable of meeting this need. On the other hand, μ -Fiber microwire is ideally suited for this application. DEMODO will therefore be the premier and preferred supplier in the world of anti-theft/security products.

Economic conditions should not adversely affect the demand or the sales projections for our products.

5.4.5 Government Regulations

It is not apparent that there are government or regulatory restrictions that would affect μ -Fiber microwire and products made therefrom. There are no HS&E or magnetic issues associated with μ -Fiber microwire.

*Demodulation LLC Proprietary and Confidential Information***6 Marketing Plan****6.1 Overview**

Our initial thrust will be to manufacture *μ-Fiber* microwire for anti-theft applications, to be closely followed by the manufacture of anti-theft tags and interrogation systems. Our initial marketing efforts will be directed at both the retail and source tagging markets. We intend to simultaneously develop novel security card systems. This will be followed by the introduction of advanced encoded products and systems within 5 years after start-up. The combination of these product innovations and offerings will yield sales approaching \$300 million by the year 2007.

Demodulation is entering the market in the introductory stage of the product type's market life cycle. The intent is to use an aggressive market penetration pricing strategy in concert with a pull promotion strategy. We will price Demodulation below the average of competitive product prices during the first several years to achieve significant market penetration.

We will be manufacturing our products domestically and pursue some vertical integration of value added products within the enterprise to maximize our gross profits. Our major dependence is on the proof of concept and ability to attain product performance. Demodulation will market microwire by using an in-house sales organization. Product promotion will be achieved with minimal advertising effort initially and some publicity by DEMOD. The bulk of the promotional activity will be initiated in years 2005 and on.

The chart below shows projected market shares over the next five years.

Projected Market Share – DEMOD vs. Competitors					
Corporation	2003	2004	2005	2006	2007
Sensormatic	50%	50%	46%	35%	34%
Wallace	3%	4%	4%	4%	4%
CheckPoint	42%	36%	30%	27%	15%
All Others	5%	10%	17%	17%	10%
Demodulation	0%	1%	3%	17%	35%

6.2 Marketing Targets**6.2.1 PHASE I - Retail**

In year 2003 we are concentrating on field test trials for the anti-theft products. These tests will be targeted to major retail chains in specific locations throughout the US. The objective of these tests will be to qualify the tag and gating systems performance. These beta tests will also provide the necessary proof and testimony of the integrity and reliability of the systems for the anti-theft market. With these testimonials, an aggressive promotional and sales campaign will be launched to penetrate the entire North

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American market. In order to meet the expected customer demand for these products, Demodulation will hire the five best sales managers from competitive industries. These sales managers will be strategically located in the Northeast / Mid-Atlantic / South / Midwest and West. Service centers will be established initially at the regional sales offices. These centers will be distribution centers for our products. The second stage of our marketing and sales effort will be directed at the label and packing industries. Due to the unparalleled features of microwire, the evolution of the anti-theft products industry will move toward (source tagging) incorporation of microwire into packaging and labels. Therefore, Demodulation will aggressively market its microwire to the source tagging market, and simultaneously develop in-house label and printing capabilities that will provide high margin value-added products lines. The combination of raw material manufacture and assembly of anti-theft products and source tagging capabilities does not exist in the world market. Incorporating these processes and products will enable Demodulation to dominate the world market for EAS products.

6.2.2 PHASE II - Security

The adaptation of the fundamental technology utilized in the Retail markets will rapidly incorporate into the security applications. The proven integrity, reliability and low cost combined with the enormous market demand for security solutions will result in applications of microwire in the accreditation, currency, and credit card industries. Marketing and Selling of these product developments will be accomplished and directed by specialist in the security industry. The company will aggressively seek and retain the highest level of personnel available.

6.2.3 PHASE III – Encoded Products

The company will strategically develop encoded microwire products. These products will have the capability of storing several bits of information and therefore be ideal for registering and rapid recall of stored digital information. This product will revolutionize inventory control, ticketing, access control, accreditation services, and countless other applications. Beta site testing will be conducted at the World Trade Center locations in North America. Once complete integration throughout the entire WTO organization will be completed and provide a world wide marketing opportunity. A new division of Demodulation will be established and the necessary marketing and sales specialist will be hired for this highly profitable and specialized market.

6.2.4 PHASE IV – Industrial & Military

Demodulation will expand its markets for microwire products through new innovations and application engineering. Targeted applications include inductive components, sensors, thermal management devices and military applications. An engineered materials group will be established to focus on the development of these highly profitable materials and markets.

6.3 Product Image

Demodulation has assembled world-renowned scientific personnel with extensive developmental and applications experience in the fields of amorphous alloys, glass science and magnetics technologies. Our primary objective has been first to assemble the technologist and second to acquire and integrate microwire technology and production. We believe the integration of this unique talent and technology will provide the foundation for the commercialization of break-through technology in the anti-theft markets and security products.

By virtue of the reputation of the personnel affiliated with this enterprise, Demodulation will be viewed as a "world class" technological enterprise in the industry. Our goal is to be the most profitable producer of anti-theft products in the world, by providing the highest quality products using the most efficient manufacturing processes.

Initial beta -site testing will confirm the reliability, integrity and dependability of EAS systems. The unique antenna/receiver design coupled with the unique harmonic signature enables our products to

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outperform existing RF, acoustic magnetic and electromagnetic products in the market. The virtual invisibility provides additional safety features for our customers. Specifically, these products will be incorporated into the label and packaging processes that make them undetectable and impossible to remove from the retail merchandise.

The gating angle refers to the position of the EAS device relative to the receivers. In current systems, there is a position where the device is not detected. This position is tested and referred to as the gating angle. Our customers will benefit from an increased gating angle that is a factor of 30% greater efficiency. This represents a dramatic improvement in the performance and integrity for the *μ -Fiber* microwire products and systems. This performance can be enhanced further by placement of microwires in multiple locations thus ensuring 100% reliability. This is not cost effective with current technologies.

The particular unique construction of microwires enables them to be utilized in a greater variety of applications that have not been possible with existing technologies. The geometry of existing products made combined with the higher costs does not allow their application in source tagged products and / or imbedded into plastics, cardboard, paper and fabrics. *μ -Fiber* microwire products fulfill the engineering requirements for these applications and are cost justifiable.

The most significant feature of microwire that separates it from other products in the market is its versatility, which allows it to be applied and incorporated into a broad variety of applications. This is achieved through applications engineering methods and not through development of new manufacturing processes. Therefore, our cost to our customers is minimized through marginal non-reoccurring engineering charges. The versatility of our products in the market, as perceived by our customers, will increase the overall acceptance of our products and lead to continued applications development.

For Demodulation, we will create an image of the "best" product (in quality, function and dependability) for the most competitive price.

6.4 The Commercial Marketplace

6.4.1 Products and Services

6.4.1.1 PRODUCTS

- *μ -Fiber* microwire tags for EAS application.
- *μ -Fiber* microwire-based access control systems.
- *μ -Fiber* microwire tracking device and fabricated components (animals and goods).
- *μ -Fiber* microwire security fabrics.
- *μ -Fiber* microwire-based paper products.
- *μ -Fiber* microwire-based tamper-proof packaging products.
- *μ -Fiber* microwire-based authentication (credit cards, access control).
- *μ -Fiber* microwire-based anti-counterfeit drivers license.

6.4.1.2 ANTENNA/RECEIVER PRODUCTS

- We will establish a separate division that will build and install antenna/receiver systems. This group will design and build systems that are concealed at our customers' locations. These systems may be concealed in areas of egress. Our systems will, whenever possible, be designed without the directionality that encumbers present anti-theft systems.

*Demodulation LLC Proprietary and Confidential Information***6.4.1.3 SERVICES**

The Company will provide consulting services under contract to retail businesses, industry, and governmental agencies to develop Special Applications such as customized access control.

It is likely that collaborative research will be conducted with joint venture partnerships. DEMOD will retain exclusive rights to any technology developed. In exchange for applications developments, a partner will be able to license or to purchase products based on said technology from DEMOD.

6.4.2 Customers by Market Segment

The prospects for our components are usually retailers, printing and labeling manufacturers, ticketing companies, and manufacturers of security products. The product is generally sold to senior management or purchase agents of these companies. The driving force for the purchase of these products is due to the enormous amount of theft occurring in retail and other operations. It has been estimated that average retail theft in the US and UK alone account for 2% of store turnover and 20% of store profit.

The objectives of purchasers and of senior management are mainly to improve the profitability of their stores by minimizing the incidence of theft. Our products have proven superiority in applications that provide improved performance at lower cost. The uniqueness and flexibility of the product enables it to be tailored to fulfill the demanding requirements of a broad variety of applications.

The prospect for Demodulation falls into a variety of diversified market segments:

- | | |
|----------------------------------|--|
| ➤ garment manufacturers | ➤ bank and credit card manufacturers |
| ➤ retail chain stores | ➤ government (security) |
| ➤ label manufacturers | ➤ law enforcement agencies |
| ➤ packaging companies | ➤ currency manufacturers |
| ➤ industrial OEM's | ➤ casinos |
| ➤ computer manufacturers | ➤ lottery and other ticket manufacturers |
| ➤ safety (tracking) | ➤ printing companies |
| ➤ hospitals | ➤ paper manufacturers |
| ➤ transportation/transit systems | |

All the prospects listed above reflect utilization of microwire that is not encoded (i.e., used as a on/off switch). With the addition of encoding technology to microwire, which we anticipate completing by 2006-2007, significant sales growth will occur and our list of prospects will expand to include the following:

- | | |
|-----------------------------|-----------------------------|
| ➤ traffic monitoring | ➤ currency |
| ➤ military - various | ➤ express mail/freight |
| ➤ grocery self check-out | ➤ access control |
| ➤ inventory control systems | ➤ credit card manufacturers |
| ➤ U.S. mail | ➤ driver's license |
| ➤ authenticated ticketing | ➤ national ID card |

*Demodulation LLC Proprietary and Confidential Information***6.4.3 Marketing Strategy**

Presently there is no Marketing Manager, all personnel report to the President. This will probably continue until sometime next year.

The basic product offering for our company includes microwire, EAS tags, and anti-theft systems. All of the market segments described in Section 6.5.2 will utilize at least one of these product forms. The flexibility of the product allows it to be used in a variety of demanding designs. The success of the company's marketing and sales will be greatly dependent on a strong Applications Engineering group. Dr. Hasegawa will provide the technical expertise and leadership for this group. The company will structure a regional sales force that will be managed by Mr. Harrison. The intention of the Company is to have industry specialists working in four domestic regions. Our overseas sales and marketing activities will be managed from the United States and will be applications engineering driven. However, regional sales specialists will be located worldwide. The company expects to form joint venture relationships with strategic printing and label manufacturers in order to capitalize on emerging source tagging market opportunities. These joint venture partners will provide access to packaging and label markets for our *μ -Fiber* microwire products. Our regional sales engineers will support these customers by providing engineering support to the end users of the labels. Additionally, our sales engineering staff will provide design solutions for the receiver and antenna systems needed to utilize the microwire products.

Sales and marketing efforts in other segments will be initiated after successful development of EAS systems. We anticipate the expansion of our sales force by early 2004, at which time successful development of products for the security industry will be complete. Distributors will not be utilized domestically during the first two years of company start-up. The marketing development for new products will be initiated by the technical center in northern New Jersey. Once application acceptance has been proven, additional sales and marketing personnel will be hired to support the growth of these market segments.

Although a technology-based company, Demodulation LLC will be driven by the Marketing and Sales group of this corporation. Clearly defined Markets and Sales opportunities will direct our development efforts. The Sales and Marketing group will be closely involved with all aspects of product development through customer acceptance and application. Our management staff has extensive experience in all aspects of product development, marketing, sales, distribution and international marketing. Additionally, management has market knowledge for security, printing and label manufacturing.

6.4.3.1 MARKETING OBJECTIVES

Our primary marketing objective for Demodulation LLC is to be the recognized leader in the development and marketing of innovative, high quality anti-theft and security products. A list of secondary objectives is given below.

- Introduce to the EAS market a revolutionary anti-theft product by year-end 2003 and achieve sales growth of over \$300 million in 5 years.
- Define new proprietary anti-counterfeiting encoded products market and introduce these in late 2004 for credit cards, national ID cards and paper products.
- Position DEMOD as the low cost supplier of EAS anti-theft devices.
- Market the highest quality and most dependable anti-theft system supplier in the world by improving both gating efficiencies and antenna systems.
- Market and integrate *μ -Fiber* microwire into Homeland Security applications by 1st quarter of 2004.
- Introduce product line for military applications by 4th quarter 2004.